WHAT IS CLAIMED IS:

1. A method for identifying a compound for treating OA, which method comprises:

a) contacting a test compound to a reaction mixture that comprises

(i) a polypeptide member of the TYRO3 subfamily of receptor tyrosine kinases, and

(ii) a ligand to said polypeptide, wherein the reaction mixture conditions permit binding of the polypeptide to the ligand to form a binding complex;

b) detecting levels of formation of the binding complex in the reaction mixture in the presence of the test compound; and

c) comparing the level of the binding complex formed in the presence of the test compound to the level of binding complex formed in the absence of said test compound, wherein a decrease in the level of the binding complex formed in the presence of the test compound indicates that the test compound may be used to treat OA.

2. A method according to Claim 1, wherein said polypeptide member of the TYRO3 subfamily of receptor tyrosine kinases is selected from the group consisting of TYRO3, Axl and cMer.

3. A method for identifying a compound for treating osteoarthritis, which method comprises:

a) contacting a test compound to a reaction mixture that comprises

(i) a TYRO3 polypeptide; and

(ii) a TYRO3 ligand, wherein the reaction mixture conditions permit binding of the TYRO3 polypeptide to the TYRO3 ligand to form a binding complex;

b) detecting levels of formation of the binding complex in the reaction mixture in the presence of the test compound; and

c) comparing the level of the binding complex formed in the presence of the test compound to the level of binding complex formed in the absence of said test compound, wherein a decrease in the level of the binding complex formed

in the presence of the test compound indicates that the test compound may be used to treat OA.

4. A method according to Claim 3, wherein the TYRO3 polypeptide comprises the amino acid sequence set forth in SEQ ID NO:2.

5. A method according to Claim 3, in which the TYRO3 ligand is selected from the group consisting of PROS1 and GAS6 polypeptide.

6. A method according to Claim 5, wherein the GAS6 polypeptide comprises the amino acid sequence set forth in SEQ ID NO:3.

7. A method for identifying an individual having osteoarthritis, which method comprises:

a) detecting a nucleic acid encoding a polypeptide member of the TYRO3 subfamily of receptor tyrosine kinases in a biological sample derived from the individual; and

b) comparing the level of said nucleic acid in the individual to levels of said nucleic acid in individuals not having osteoarthritis, wherein elevated levels of said nucleic acid in said biological sample derived from the individual indicates that the individual has OA.

8. A method according to Claim 7, wherein said polypeptide member of the TYRO3 subfamily of receptor tyrosine kinases is selected from the group consisting of TYRO3, Axl and cMer.

9. A method according to Claim 7, wherein said biological sample comprises biological material selected from the group consisting of chondrocytes, cartilage, synovival fluid and serum.

10. A method for identifying an individual having osteoarthritis, which method comprises:

a) detecting a TYRO3 nucleic acid in a biological sample derived from the individual; and

b) comparing the level of the TYRO3 nucleic acid in the individual to levels of the TYRO3 nucleic acid in individuals not having OA, wherein elevated levels

of the TYRO3 nucleic acid in said biological sample derived from the individual indicates that the individual has OA.

11. A method according to Claim 10, wherein the TYRO3 nucleic acid encodes a polypeptide having the amino acid sequence set forth in SEQ ID NO:2.

12. A method according to Claim 10, wherein the TYRO3 nucleic acid comprises the nucleotide sequence set forth in SEQ ID NO:1.

13. A method according to Claim 10, wherein said biological sample comprises biological material selected from the group consisting of chondrocytes, cartilage, synovival fluid and serum.

14. A method for identifying an individual having osteoarthritis, which method comprises:

a) detecting levels of a polypeptide of the TYRO3 subfamily of receptor tyrosine kinases in a biological sample derived from the individual; and

b) comparing the level of said polypeptide in the individual to levels of said polypeptide in individuals not having OA, wherein elevated levels of said polypeptide in said biological sample derived from the individual indicates that the individual has OA.

15. A method according to Claim 14, wherein said polypeptide of the TYRO3 subfamily of receptor tyrosine kinases is selected from the group consisting of TYRO3, Axl and cMer.

16. A method according to Claim 14, wherein said biological sample comprises biological material selected from the group consisting of chondrocytes, cartilage, synovival fluid and serum.

17. A method for identifying an individual having OA, which method comprises:

a) detecting a TYRO3 polypeptide in a biological sample derived from the individual; and

b) comparing the level of the TYRO3 polypeptide in the individual to levels of the TYRO3 polypeptide in individuals not having OA, wherein elevated levels of the TYRO3 polypeptide in said biological sample derived from the individual indicates that the individual has OA.

18. A method according to Claim 17, wherein the TYRO3 polypeptide comprises the amino acid sequence set forth in SEQ ID NO:2.

19. A method according to Claim 15, wherein said biological sample comprises biological material selected from the group consisting of chondrocytes, cartilage, synovival fluid and serum.

20. A method for identifying an individual having osteoarthritis, which method comprises:

a) detecting, in a biological sample derived from the individual, a nucleic acid that encodes a ligand of a polypeptide member of the TYRO3 subfamily of receptor tyrosine kinases; and

b) comparing the level of the nucleic acid in the individual to levels of the nucleic acid in individuals not having OA, wherein elevated levels of the nucleic acid in said biological sample derived from the individual indicates that the individual has OA.

21. A method according to Claim 20, wherein said polypeptide member of the TYRO3 subfamily of receptor tyrosine kinases is selected from the group consisting of TYRO3, Axl and cMer.

22. A method according to Claim 20, wherein said biological sample comprises biological material selected from the group consisting of chondrocytes, cartilage, synovival fluid and serum.

23. A method for identifying an individual having osteoarthritis, which method comprises:

a) detecting, in a biological sample derived from the individual, a nucleic acid that encodes a TYRO3 ligand; and

b) comparing the level of the nucleic acid in the individual to levels of the nucleic acid in individuals not having OA, wherein elevated levels of the nucleic acid in said biological sample derived from the individual indicates that the individual has OA.

24. A method according to Claim 23, wherein the TYRO3 ligand is selected from the group consisting of PROS1 and GAS6.

25. A method according to Claim 23, wherein the TYRO3 ligand comprises the amino acid sequence set forth in SEQ ID NO:3.

26. A method according to Claim 23, wherein the nucleic acid encoding said TYRO3 ligand comprises the nucleotide sequence set forth in SEQ ID NO:4.

27. A method according to Claim 23, wherein said biological sample comprises biological material selected from the group consisting of chondrocytes, cartilage, synovival fluid and serum.

28. A method for identifying an individual having OA, which method comprises:

a) detecting levels of a ligand of a member of the TYRO3 subfamily of receptor tyrosine kinases in a biological sample derived from the individual; and

b) comparing the level of said ligand in the individual to levels of said ligand in individuals not having OA, wherein elevated levels of said ligand in said biological sample derived from the individual indicates that the individual has OA.

29. A method according to Claim 25, wherein said member of the TYRO3 subfamily of receptor tyrosine kinases is selected from the group consisting of TYRO3, Axl and cMer.

30. A method according to Claim 25, wherein said biological sample comprises biological material selected from the group consisting of chondrocytes, cartilage, synovival fluid and serum.

31. A method according to Claim 25, wherein said ligand is selected from the group consisting of PROS1 and GAS6.

32. A method according to Claim 25, wherein said ligand comprises the amino acid sequence set forth in SEQ ID NO:3.

33. A method according to Claim 25, wherein a nucleic acid encoding said ligand comprises the nucleotide sequence set forth in SEQ ID NO:4.

34. A method for identifying an individual having osteoarthritis, which method comprises:

a) detecting the level of a TYRO3 ligand in a biological sample derived from the individual; and

b) comparing said level of the TYRO3 ligand in the individual to levels of the TYRO3 ligand in individuals not having OA, wherein elevated levels of the TYRO3 ligand in said biological sample derived from the individual indicates that the individual has OA.

35. A method according to Claim 34, wherein the TYRO3 ligand is selected from the group consisting of PROS1 and GAS6.

36. A method according to Claim 34, wherein the TYRO3 ligand comprises the amino acid sequence set forth in SEQ ID NO:3.

37. A method according to Claim 34, wherein a nucleic acid encoding said TYRO3 ligand comprises the nucleotide sequence set forth in SEQ ID NO:4.

38. A method according to Claim 34, wherein said biological sample comprises biological material selected from the group consisting of chondrocytes, cartilage, synovival fluid and serum.